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EXAMINER

PATEL, JAYESH A

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<p align="center">Office Action Summary</p>	Application No. 10/771,293	Applicant(s) IKEDA, KAZUYO	
	Examiner Jayesh A. Patel	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/26/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs, which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claim(s) **[21]** is/are rejected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter as follows. Claim **[21]**

defines a **[a computer program]** embodying functional descriptive

material. However, the claim does not define a computer-readable medium or

memory and is thus non-statutory for that reason (i.e., "When functional

descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed **[a computer program]** can range from paper on which the program is written, to a program simply contemplated and memorized by a person.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11,13,15,18-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Niblack et al. (US 6182069) hereafter Niblack.

1. Regarding Claim 1, Niblack discloses an image search apparatus in **(FIG 1)** which searches for an image by using image storage means for storing a plurality of images **(Element 36)**, region information storage means for storing partial images included in the respective images stored in the image storage means in correspondence with the respective images **(Element 34)**, and region feature storage means for storing features of the partial images stored in the region

information storage means in correspondence with the partial images (**Element 35**), comprising: image feature designation means for designating a feature of a search target image (**Elements 15,16 and Col 3 Lines 58-65**); candidate image determination means for searching features of partial images in the region feature storage means on the basis of the feature of the image which is designated by said image feature designation means (**Element 32 and Col 3 Lines 66 through Col 4 Lines 1-17**), and determining an image which is made to correspond to a partial image obtained on the basis of a search result as a candidate image from the images stored in the image storage means at (**Col 4 Lines 11-17**); and search result display means (**Element 13**) for displaying a reduced image of the candidate image determined by said candidate image determination means, wherein said search result display means displays a reduced image of the candidate image upon enlarging the partial image included in the candidate image (**Element 13, Fig 9 Col 10 Lines 17-25 and Col 18 Lines 24-28**).

2. Regarding Claim 2, Niblack discloses the apparatus according to claim 1, characterized in that when a plurality of candidate images are obtained on the basis of a search result, said search result display means displays reduced images of the plurality of candidate images in the form of a list at (**Element 13, Fig 9 Col 10 Lines 17-25 and Col 18 Lines 24-28**).

3. Regarding Claim 3, Niblack discloses an image search apparatus in **(FIG 1)** which searches for an image by using image storage means for storing a plurality of images **(Element 36)**, region information storage means for storing partial images included in the respective images stored in the image storage means in correspondence with the respective images **(Element 34)**, and region feature storage means for storing features of the partial images stored in the region information storage means in correspondence with the partial images **(Element 35)**, comprising: image feature designation means for designating a feature of a search target image **(Elements 15,16 and Col 3 Lines 58-65)**; candidate image determination means for searching features of partial images in the region feature storage means on the basis of the feature of the image which is designated by said image feature designation means **(Element 32 and Col 3 Lines 66 through Col 4 Lines 1-17)**, and determining an image which is made to correspond to a plurality of partial images **(Col 5 Lines 15-21)** obtained on the basis of a search result as a candidate image from the images stored in the image storage means **(Col 4 Lines 11-17)**; and search result display means **(Element 13)** for displaying a reduced image of the candidate image determined by said candidate image determination means, wherein said search result display means displays a reduced image of the candidate image upon enlarging the plurality of partial images included in the candidate image **(Element 13, Fig 9 Col 10 Lines 17-25 and Col 18 Lines 24-28)**.

4. Regarding Claim 4, Niblack discloses the apparatus according to claim 3, characterized in that said search result display means synthesizes the plurality of partial images to generate a new single partial image in **(Fig 15,16 and Col 17 Lines 7-13)**, and displays the new single partial image as a reduced image in **(Fig 9 Col 10 Lines 17-25)**.

5. Regarding Claim 5, Niblack discloses the apparatus according to claim 4, characterized in that said search result display means generates a new single partial image by synthesizing the plurality of partial images while a relative positional relationship between the plurality of partial images is kept at **(Col 18 Lines 21-28 and Col 10 Lines 24-25)**.

6. Regarding Claim 6, Niblack discloses the apparatus according to claim 3, characterized in that when the plurality of partial images partly overlap at **(Fig 4, Col 5 Lines 65-through Col 6 Lines 1-26)**, said search result display means generates a new single partial image by synthesizing the plurality of partial images at **(Col 8 Lines 54-63)**.

7. Regarding Claim 7, Niblack discloses the apparatus according to claim 3, characterized in that sizes of the plurality of partial images are unified to a predetermined size in **(Fig 3 element 66)**.

8. Regarding Claim 8, Niblack discloses an image search apparatus in **(FIG 1)** which searches for an image by using image storage means for storing a plurality of images **(Element 36)**, region information storage means for storing partial images included in the respective images stored in the image storage means in correspondence with the respective images **(Element 34)**, and region feature storage means for storing features of the partial images stored in the region information storage means in correspondence with the partial images **(Element 35)**, comprising: image feature designation means for designating a feature of a search target image **(Elements 15,16 and Col 3 Lines 58-65)**; candidate image determination means for searching features of partial images in the region feature storage means on the basis of the feature of the image which is designated by said image feature designation means **(Element 32 and Col 3 Lines 66 through Col 4 Lines 1-17)**, and determining an image which is made to correspond to a partial image obtained on the basis of a search result as a candidate image from the images stored in the image storage means **(Col 4 Lines 11-17)**; and search result display means **(Element 13)** for displaying a reduced image of the candidate image determined by said candidate image determination means in a plurality of patterns at **(Col 11 Lines 5-10)**.

9. Regarding Claim 9, Niblack discloses the apparatus according to claim 8, characterized in that said search result display means **(Element 13 Fig 1)** displays the plurality of reduced images in the form of a list **(Col 12 Lines 61-67)**

and Col 13 Lines 1-22). Niblack also discloses reduced images of the patterns in **(Fig 5).**

10. Regarding Claim 10, Niblack discloses the apparatus according to claim 8, characterized in that said search result display means **(Element 13 Fig 1)** displays a reduced image of the candidate image at **(Col 12 Lines 61-67 and Col 13 Lines 1-22).** Niblack also discloses reduced images of the patterns in **(Fig 5).**

11. Regarding Claim 11, Niblack discloses the apparatus according to claim 8, characterized in that said search result display means **(Element 13 Fig 1)** displays a reduced image of the partial image used to determine the candidate image at **(Col 12 Lines 61-67 and Col 13 Lines 1-22).** Niblack also discloses reduced images of the patterns in **(Fig 5).**

12. Regarding Claim 13, Niblack discloses the apparatus according to claim 8, characterized in that the apparatus further comprises switching means for switching display of the reduced images in said search result display means, and said search result display means alternately displays the reduced images at the same position one by one on the basis of a switching instruction from said switching means in **(Fig 5).**

13. Regarding Claim 15, Niblack discloses the apparatus according to claim 1, characterized in that the partial image comprises a rectangular image having a region surrounded by a circumscribed rectangle of a predetermined object region included in the image in **(Fig 5)**.

14. Claim 18 is a corresponding method performed by the apparatus as Claimed in Claim 1. See the explanation of apparatus performing a method in Claim 1.

15. Claim 19 is a corresponding method performed by the apparatus as Claimed in Claim 3. See the explanation of apparatus performing a method in Claim 3.

16. Claim 20 is a corresponding method performed by the apparatus as Claimed in Claim 8. See the explanation of apparatus performing a method in Claim 8.

17. Claim 21 is a Computer program functioning a method of Claim 1. See the explanation of claim1. Niblack also discloses this at **(Col 3 Lines 31-43)**.

18. Claim 22 is a computer-readable recording medium storing a program defined in claim 21. Niblack discloses this at **(Col 3 Lines 31-43)**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12,14,16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niblack in view of Brown et al. (US 6356908) hereafter Brown.

19. Regarding Claim 12, Niblack discloses the apparatus according to claim 8.

Niblack discloses displaying thumbnails (**search results**) on the display 13, however does not disclose said search result display means alternately displays the reduced images at the same position one by one in an automatic manner.

Brown discloses various possible configurations of the search results being displayed at (**Col 6 Lines 38-48 and Col 9 Lines 7-24**). Brown discloses presenting a set of thumbnail images of the linked pages in the database near the links to the linked pages at (**Col 2 Lines 18-20**). Brown further discloses that a textual name followed by a short textual description of the linked page does not provide sufficient information to enable one to make an intelligent decision as to open the link at (**Col 1 Lines 55-59**). Both Niblack and Brown are from the same field of endeavor and are analogous art, therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to have used the teachings of brown in the Query system and method of Niblack for the above reasons.

20. Regarding Claim 14, Niblack discloses the apparatus according to claim 1. Niblack is silent about said search result display means displays the reduced image in an area with a predetermined size.

However Brown discloses said search result display means displays the reduced image in an area with a predetermined size at **(Col 9 Lines 18-24)**.

21. Regarding Claim 16, Niblack discloses the apparatus according to claim 1. Niblack is silent about the said search result display means displays a reduced image of the candidate image while emphasizing the partial image included in the candidate image.

However Brown discloses said search result display means displays a reduced image of the candidate image while emphasizing the partial image included in the candidate image at **(Col 9 Lines 18-24 and Fig 12)**.

22. Regarding Claim 17, Niblack discloses the apparatus according to claim 1. Niblack also disclose region feature storage means stores, as a feature of the image, at least one of concept information expressing a concept obtained from the partial image in **(Fig 5)**. Niblack however does not disclose Language information expressing the concept in a language, an image feature expressing a feature of the partial image, and a combination of the concept information, the language information, and the image feature.

Brown discloses Language information expressing the concept in a language, an image feature expressing a feature of the partial image, and a combination of the concept information, the language information, and the image feature in **(Fig 5,6 and Figs 9 and 10)**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jayesh A. Patel whose telephone number is 571-270-1227. The examiner can normally be reached on M-F 7.00am to 4.30 pm (5-4-9). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jayesh Patel

04/17/07

JP


JINGGE WU
SUPERVISORY PATENT EXAMINER